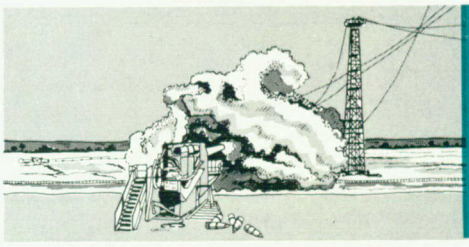
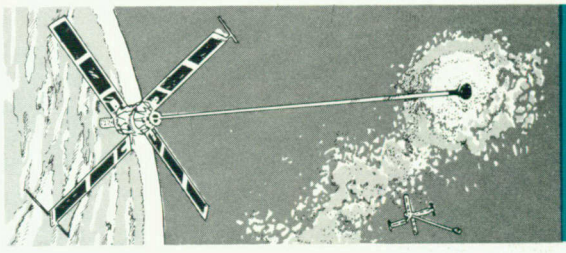
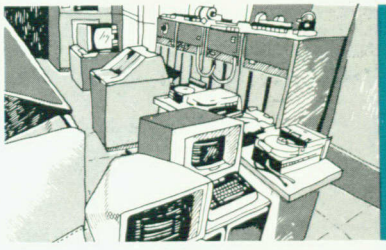
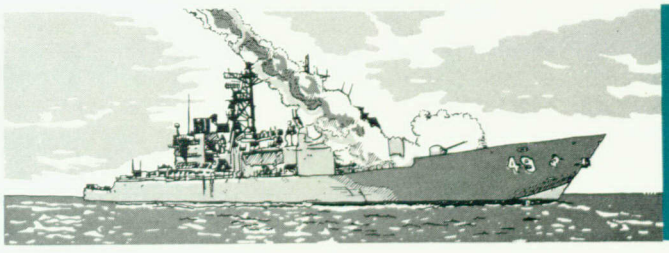
1992 REPORT TO THE COMMUNITY









NAVSWC-DD-MP-92-179

NAVAL SURFACE WARFARE CENTER
DAHLGREN DIVISION
DAHLGREN, VIRGINIA

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What We've Done Together

1992 Report to the Community

Naval Surface Warfare Center
Dahlgren Division
Dahlgren, VA 22448-5000

20 APRIL 1992

NSWCDD/MP-92/179

MISSION

Provide research, development, test and evaluation, engineering, and fleet support for surface warfare systems, surface ship combat systems, ordnance, mines, amphibious warfare systems, mine countermeasures, special warfare systems, and strategic systems.

MAJOR PROGRAMS

AEGIS
TRIDENT
TOMAHAWK
Mine Countermeasures
Technology Block (six major)
Ship Self-Defense
Antitactical Ballistic Missile
Mk 50 Torpedo Warhead
DDG 51 Class Combat System
Amphibious Warfare Systems
AN/SLQ-32
Special Warfare

For more information, contact:

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Visitor Control, Clara F. Walton, (703) 663-8501
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WELCOME

For almost three-quarters of a century, the Navy and its community neighbors in Virginia's Northern Neck and southern Maryland have prospered in a much-treasured partnership that was established and is secured by the common bonds of friendship, patriotism, national defense, and economics. We take great pride in this partnership. We have reason to be proud, especially of our military and civilian citizens who have emulated the highest standard of outstanding achievement to safeguard America's technological defensive edge.

The history of the past seven decades has been punctuated by certain and steady progress for both the installation and its community neighbors. The installation we now know as the Dahlgren Division, Naval Surface Warfare Center (NSWCDD) grew from a tiny proving ground for testing naval guns to be among the largest research and development (R&D) centers in the United States. The future promises to be highlighted by the hopes and dreams of even greater achievement as NSWCDD excels to its new mission: *to provide research, development, test and evaluation, engineering, and fleet support for surface warfare systems, surface ship combat systems, ordnance, mines, amphibious warfare systems, mine countermeasures, special warfare systems, and strategic systems.*

That mission encompasses several locations. In 1974, the Naval Ordnance Laboratory (NOL) at White Oak, Maryland was merged with Dahlgren's Naval Weapons Laboratory (NWL) to form the Naval Surface Weapons Center. The merging of these human resources, facilities, and research, development, test, and evaluation (RDT&E) enhanced the programs and services to the Fleet while preserving a longstanding tradition of excellence. With the merger came NOL detachments at Fort Monroe, Virginia and Fort Lauderdale, Florida. In 1981, a detachment at Wallops Island, Virginia was established as the mission was expanded to be the principal Navy RDT&E Center for surface ship combat systems, ordnance, mines, and strategic systems support. Accordingly, in 1987, the Naval Surface Weapons Center became the Naval Surface Warfare Center.

In January of this year, as the monolith of Soviet-style Communism crumbled and with it the Cold War, another transformation was to take place. A consolidated Naval Surface Warfare Center at Crystal City, Virginia, which is directed by the Naval Sea Systems Command (NAVSEA), was created out of the *Base Closure and Realignment Act of 1991*. The new Center is composed of five divisions located at Port Hueneme, California; Crane, Indiana; Indian Head, Maryland; Carderock, Maryland; and Dahlgren, Virginia. The Dahlgren Division now includes the former Coastal Systems Center (CSS) at Panama City, Florida as an operating site for amphibious warfare, diving and salvage, mine countermeasures, and special warfare.

CSS brings to NSWCDD 650 acres, 1300 civilians, and 133 military personnel. Included are seven major departments that encompass facilities to conduct engineering integration and interface for mine countermeasures, underwater sensors, torpedo countermeasures, engineering evaluation of swimmer and diver equipment, magnetic target detection and classification, acoustic research, transducer development, new materials R&D, underwater weapons, underwater vehicles, advanced technology computations, gas analysis, mechanical testing, and local area networking.

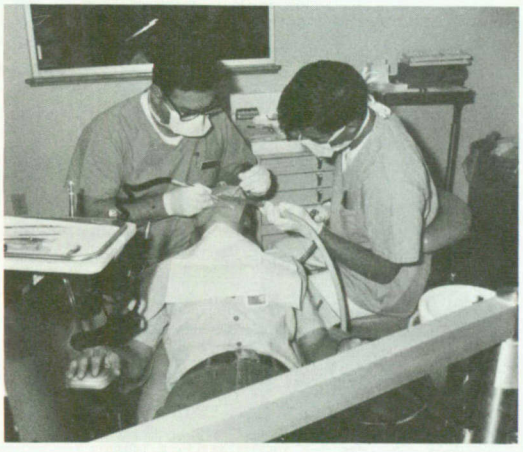
NSWCDD continues to be responsible for Navy-wide leadership in surface ship combat systems engineering and integration, surface

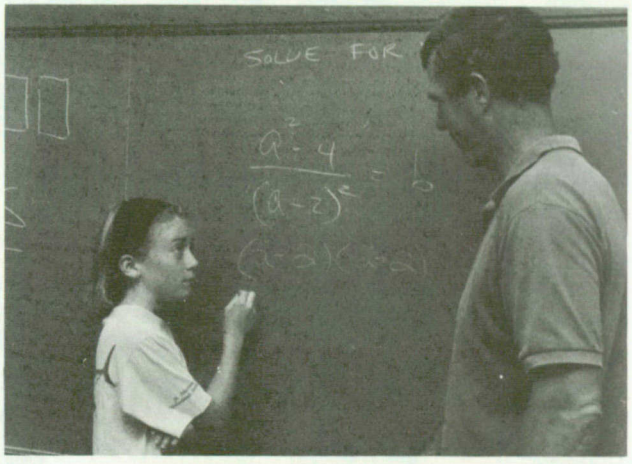
warfare analysis, surface ship electromagnetic/electro-optic reconnaissance and search systems, surface ship gun and missile systems, missile and projectile warheads, mines and torpedo weaponry, surface ship electronic warfare, strategic systems targeting-fire control-reentry systems, nuclear weapons effects, surface ship biological and chemical warfare systems, directed energy weapon systems, explosives, and weapon systems fuzes.

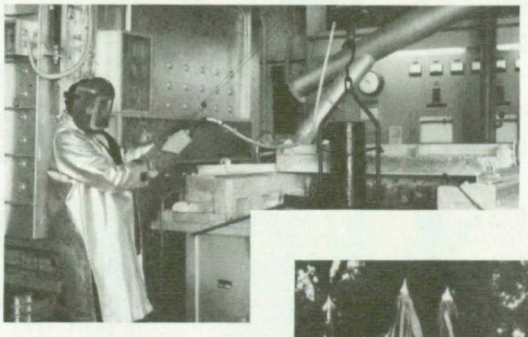
Major programs include AEGIS, TRIDENT, TOMAHAWK, Mine Countermeasures, Technology Block (six major), Ship Self-Defense, Antitactical Ballistic Missile, Mk 50 Torpedo Warhead, DDG 51 Class Combat System, Amphibious Warfare Systems, AN/SLQ-32, and Special Warfare.

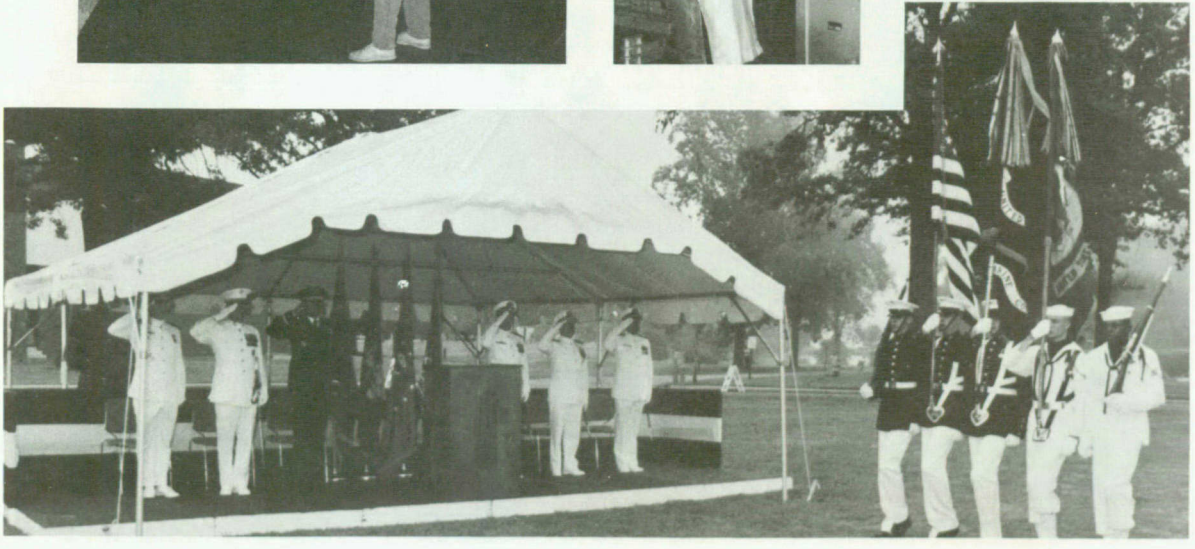
Under the joint leadership of military captaincy and civilian technical overview, NSWCDD's work draws on many disciplines to help advance the Navy's technologies and innovations to safeguard our nation for the future.

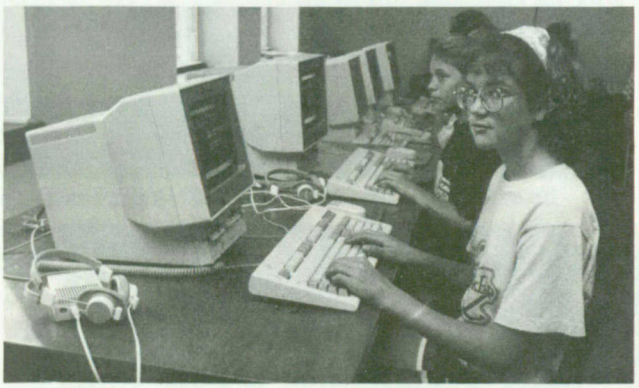
TECHNOLOGY MAY BE THE KEY TO THE FUTURE, BUT OUR PEOPLE ARE THE KEY TO TECHNOLOGY!

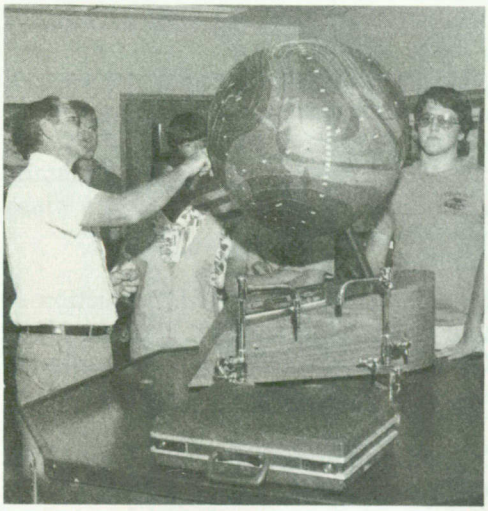


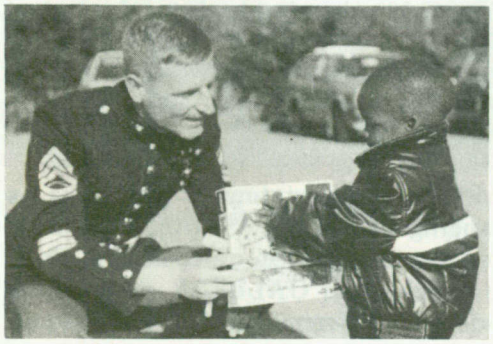


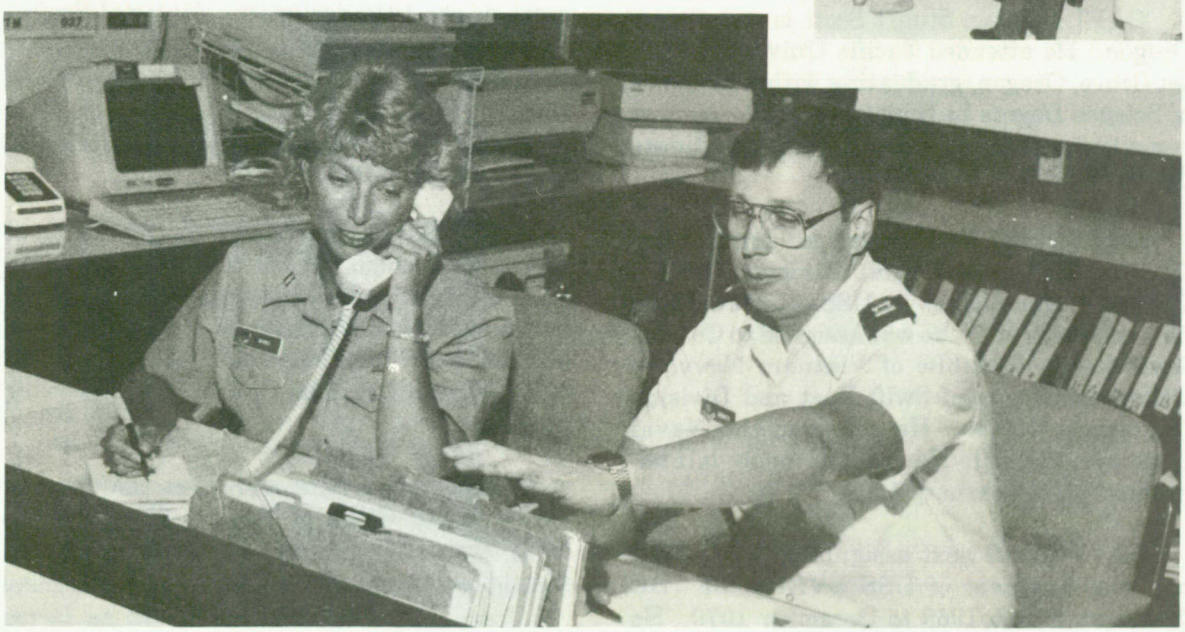












CAPT NORMAN S. SCOTT, *USN*

COMMANDER
NSWCDD

CAPT Norman Stuart Scott is a native of Oregon. He attended Pacific University, Forest Grove, Oregon, graduating with a Bachelor of Science Degree in Biology in 1963. He was commissioned through the Officer Candidate School in 1965.

CAPT Scott first served as Auxiliaries Division Officer and First Division Officer/ Combat Cargo Officer in USS ALAMO (LSD 33). In March 1967, he was assigned to Coastal Division 11, Republic of Vietnam Navy, as Officer in Charge of Swift Boat and Division Operations Officer. He attended the Naval Destroyer School, Newport, Rhode Island graduating in February 1969.

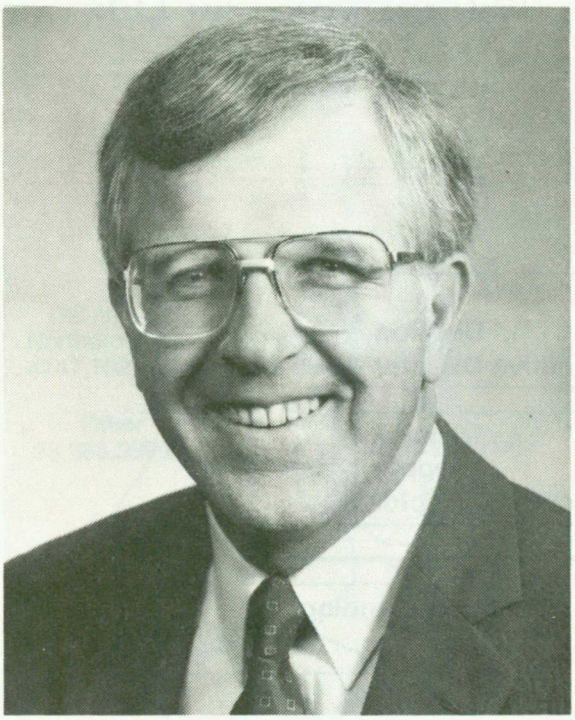
CAPT Scott's next assignment was a tour as Chief Engineer of USS EVERSOLE (DD 789) from March 1969 to December 1970. He was accepted to the Naval Post Graduate School, Monterey, California, where he graduated in 1973 with a Master-of-Science Degree in Management Science. CAPT Scott was then assigned to Supervisor of Shipbuilding and Repair, Newport News, Virginia, as Assistant Project Manager for the new Virginia class nuclear-powered cruisers.

After completing a course of instruction at the Naval Command and Staff College, Newport, Rhode Island, CAPT Scott was assigned as Executive Officer aboard USS RICHARD L. PAGE (FFG 5), which received the Meritorious Unit Commendation and the Battenburg Cup for excellence. From May 1979 to March 1981, CAPT Scott served as the Operational Test Coordinator for the OPEVAL of the FFG 7 class frigate at Commander Operational Test and Evaluation Force, Norfolk, Virginia. He was promoted to the rank of Commander in July 1979.

CAPT Scott's next tour of duty was as Commanding Officer of USS GALLERY (FFG 26) from December 1981 until March 1984, during which time GALLERY earned the Meritorious Unit Commendation. He was promoted to his present rank in August 1985 and received the 1210 designator (Material Professional) in August 1986. From September 1986 to October 1988, CAPT Scott was assigned to the AEGIS Shipbuilding Program. He commanded the cruiser USS GRIDLEY (CG 21) from April 1989 to April 1991.

CAPT Scott's awards include the Legion of Merit, Meritorious Service Medal (Gold Star in Lieu of Third Award), the Navy Commendation Medal (Gold Star in Lieu of Third Award), and the Navy Achievement Medal. In addition, he wears various campaign and service medals.

CAPT Scott is married to the former Cheryl Lynn Gillis of Dayton, Washington. They have two children, Kevin Andrew and Carrie Lynn.



DR. THOMAS A. CLARE

EXECUTIVE DIRECTOR
NSWCDD

Dr. Thomas A. Clare has been Executive Director of NSWCDD since the inception of the new Center in January 1992. He had been Technical Director of the former Naval Surface Warfare Center since February 1989.

A native of New York, Dr. Clare accepted a position as an aeroballistics engineer at the Naval Surface Warfare Center, Dahlgren, Virginia in 1967. He holds bachelor's and master's degrees in aerospace engineering from the University of Notre Dame and completed his doctorate there in 1970.

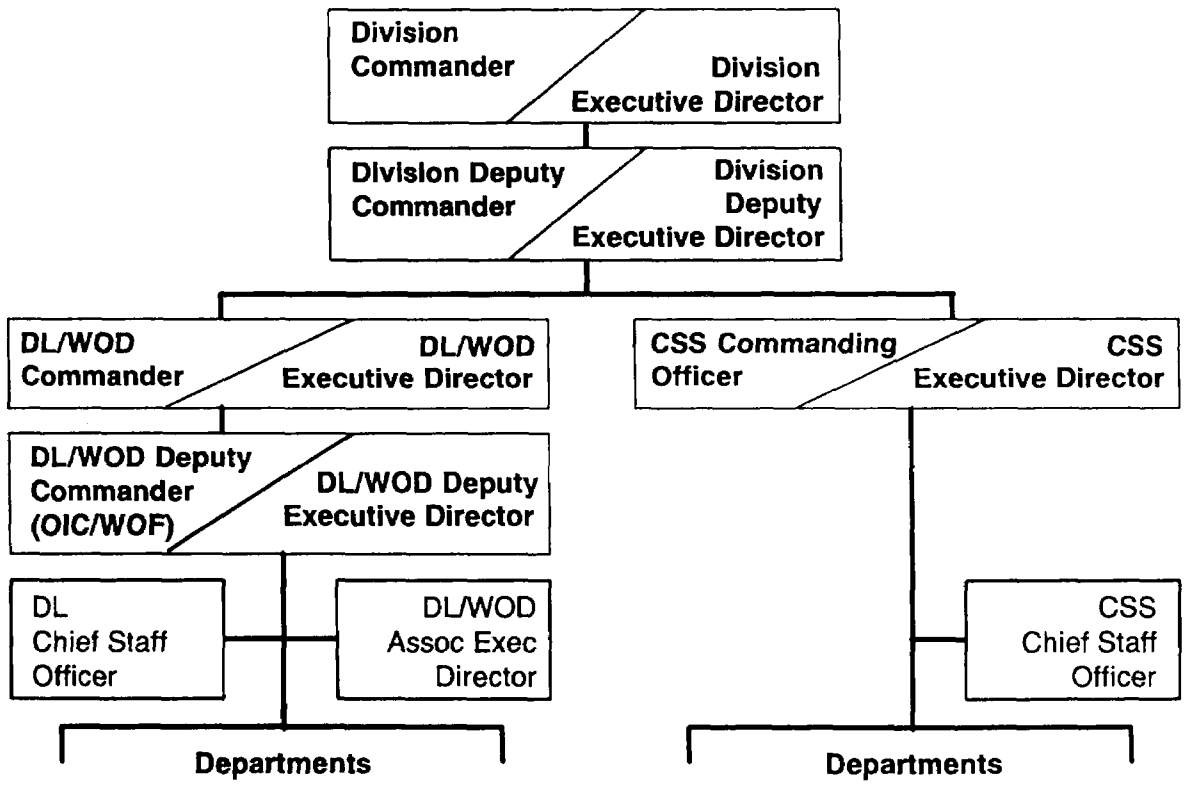
Dr. Clare was selected to head the Center's Aeromechanics Branch in 1973. Two years later, he was named Head of the Exterior Ballistics Division. From 1975 to 1976, Dr. Clare served as Science Advisor to Commander, Naval Surface Force Atlantic in Norfolk, Virginia.

Upon his return, Dr. Clare headed the AEGIS Ship Combat Systems Division until he was named Deputy Head of the Center's Electronics Systems Department in 1979. Subsequently, he headed the Combat Systems and the Strategic Systems Departments before moving to the Engineering and Information Systems Department.

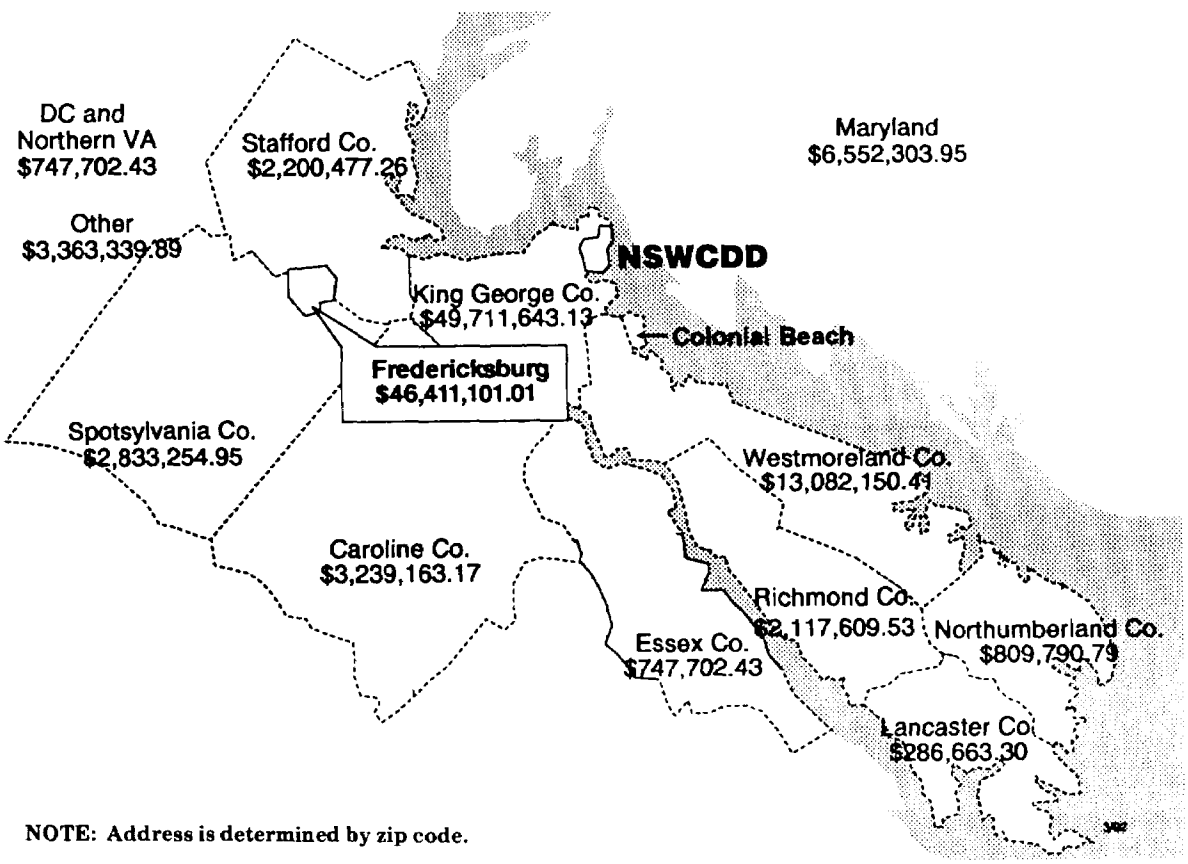
Dr. Clare has received the Navy Superior Civilian Service Award in 1986 for his outstanding technical, managerial, and administrative leadership. Early in the development of the Navy's Warfare Systems Architecture and Engineering concepts, he chaired a working group at the Naval Space and Warfare Systems Command that prepared a transition plan for battle force command and control systems.

Dr. Clare resides in Fredericksburg, Virginia with his wife, Rose Mary, and son, Todd, a high school student. Son Tom is a student at the University of Notre Dame.

NSWCDD'S ORGANIZATIONAL CHART (MARCH 1992)



PAYROLL DISTRIBUTION (1991)



NOTE: Address is determined by zip code.

PEOPLE—OUR MOST IMPORTANT RESOURCE

PERSONNEL ONBOARD
(03/31/92)

NSWCDD	Site		
	DL	WOD	CSS
Onboard	3428	1765	1447
Military	130	26	144
Civilians (FTP)	3250	1698	1266
Civilians (Other)	48	41	37
Scientists and Engineers	1688	1001	640

SCIENTISTS AND ENGINEERS BY DISCIPLINE
(FTP) (1/31/91)

Discipline	Site		
	DL	WOD	CSS
Electrical and Electronics Engineer	437	316	242
Mechanical Engineer	170	181	205
General Engineer	62	88	16
Aerospace Engineer	69	41	0
Other Engineer	68	66	25
Mathematician/Statistician	312	24	22
Physicist	153	119	71
Computer Scientist	335	66	22
Chemist	10	52	0
Other Scientist	25	15	14
Operations Research Analyst	47	33	23

MAJOR LOCATIONS

Asset	Dahlgren (+Wallops)	White Oak	Coastal Systems Station	Ft. Lauderdale
Land (acres)	4320	733	650	28
Buildings* (number/square footage)	567/2.10M	228/1.30M	222/1.00M	19/0.07M
Current Plant Value** ($M)	532	342	169	7

*Includes permanent, semipermanent, and temporary.

**Current value of buildings and structures as of September 91. Does not include land or equipment value.

CONTRACTS AND PURCHASES (FY91) AT DAHLGREN

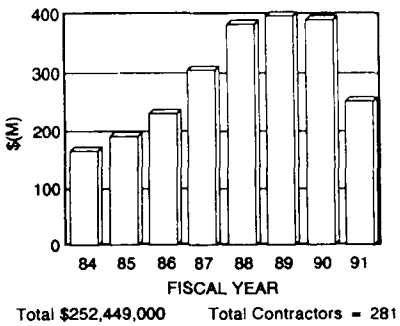
Total	**$253M**
Awarded	**$158M**
In Virginia	$141M
In Maryland	$17M
To Small Businesses	**$44M**
In Virginia	$41M
In Maryland	$3M
To Disadvantaged Businesses	**$24M**
In Virginia	$22M
In Maryland	$2M
To Women-Owned Businesses	**$2.241M**
In Virginia	$2M
In Maryland	$0.241M

CONTRACTS AWARDED IN MARYLAND AND VIRGINIA*

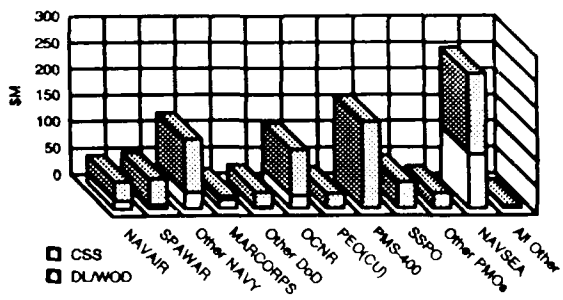
Awards	Maryland	Virginia
Total Awards	17,059	140,736
Small Business Awards	2,761	41,161
Small Disadvantaged Awards	1,866	21,520
Women-Owned Business Awards	241	2,006

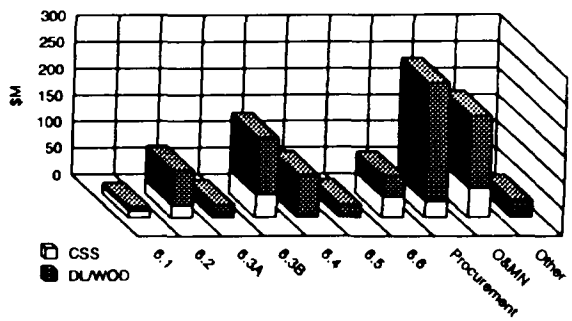
*Cumulative Through September, FY91, Dahlgren

CONTRACT TRENDS



SOURCE OF FUNDS (FY92)





NSWCDD'S MAJOR ACCOMPLISHMENTS (FY90 - 91)

Chemical and Biological Warfare (CBW) Defense and Protection

- Provided special chemical warfare (CW) protective equipment (US, UK, and Israeli) items to SEALS.
- Provided decontamination and casualty handling training to Fleet medical personnel.
- Provided CW Protective Ensemble/Chemical Agent Monitor (CAM) and training to SEALS, EOD Groups, USMC/Navy Special Units, and Navy civilians deploying to the Persian Gulf area.
- Tested detection capabilities of CAM on nonclassical chemical agents.
- Provided technical CW support to OPNAV/CINCPAC/CINCLANT.
- Tested Technical Chemical Protective Overgarment for Navy, USMC, and Army to assess hazard from a novel form of aerosolized agent.
- Provided Fleet with a modified CW attack model for use on a Zenith 248 computer aboard ship.
- Collaborated with Canada and UK on CBW hazard assessment.
- Provided technical and acquisition support to USMC on
  - CW Protective Ensemble design selection
  - Detection systems capabilities and utilization options
  - Equipment and operational problems in desert environment (special troubleshooting team)
- Represented USMC on Joint Panel on *Desert Shield* Chemical/Biological Defense issues.
- Developed and distributed special decoy systems (active and passive) to support the USMC.
- Developed and delivered the AN/ULQ-16 Pulse Analyzer PC-based software to Atlantic Intelligence Command, Norfolk (automates building of threat libraries for AN/ULQ-16).

Guns and Missiles

- Supported safety certification of ammunition and load-out for USS WISCONSIN and USS MISSOURI (to support lifting of moratorium on use of 16-in. guns).
- Developed weaponry (lethality and effectiveness) information to defeat BOGHAMMER (high-speed patrol boat) threat, the SCUD missile, known Iraqi jammers, and other threats in the Persian Gulf area.
- Provided software quick-fix for a weapon control problem on a ship in the Persian Gulf.
- Supported TOMAHAWK planning.

Electromagnetic Compatibility (EMC)

- Assisted USS MOOSBRUGGER (deployed in the Persian Gulf) with an electromagnetic interference (EMI) problem that was affecting one of her combat systems.

- Conducted HERO survey of USS LASALLE in the Persian Gulf; other surveys were made in support of USMC.
- Provided technical support to Navy Working Group for Biological Warfare Agents Detection (NAVSEA chairmanship).
- Supported the outfitting of several deploying ships with Collective Protection Systems.

AEGIS

- Provided *lessons learned* to deployed Fleet units on radar environment in the Persian Gulf (from digital data collected in that region from 1987 to 1989) to maximize operational effectiveness.
- Deployed a team to the Red Sea to study SPY-1A radar performance in that harsh environment.
- Reconfigured USS SAN JUACINTO to full tactical capability after her participation in critical cooperative engagement experiment.
- *Fine tuned* system performance based on careful assessment of the threat and environment:
  - Improvements to computer programs for Baseline 1, Baseline 2 Phase II, Baseline 2 Phase III, and Baseline 3 ships
  - Joint effort that involved PMS 400, NAVSEA, NSWSES, GESD, PMTC, and others
  - Involved live, at sea, missile firings to validate the programs
  - Installation in ships December through March

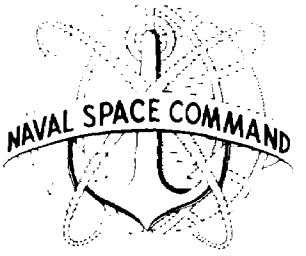
Special Electronic Warfare (EW) Operations

- Updated AN/SLQ-32V threat libraries for Saudi Arabia.
- Upgraded AN/SLQ-32V software (enhanced electromagnetic countermeasures capability) and delivered to ships in the Persian Gulf area.

LEADERSHIP AREAS

NSWCDD is responsible for Navy-wide leadership in

- Surface warfare analysis
- Surface ship combat systems and combat control systems (except antisubmarine warfare)
- Surface ship electronic warfare
- Surface ship electromagnetic and electro-optical reconnaissance, search, and track systems
- Surface ship gun systems and projectiles
- Surface ship missile systems with the Naval Weapons Center
- Surface ship combat system survivability
- Navy strategic targeting, fire control, and reentry systems
- Naval mine systems
- Warheads and fuzes for underwater weapons
- Energetic materials (explosives)
- Directed energy weapon systems
- Nuclear weapons effects on surface ship electronics
- Surface ship biological and chemical warfare systems



NAVAL SPACE COMMAND (NAVSPACECOM)

Exploiting the High Ground

As the first U.S. Carrier Battle Groups converged on the Middle East in response to Iraq's invasion of Kuwait on 2 August 90, NAVSPACECOM had already begun mobilizing a wide array of space-based resources to support what would come to be known as *Operation Desert Shield* and, later, *Operation Desert Storm*.

With direction from NAVSPACECOM, critical communications satellite systems were reconfigured to improve command and control. Using tactical intelligence derived from a number of space resources, NAVSPACECOM began transmitting up-to-the-minute reports on the changing threat directly to the Battle Group commanders.

Components of the 2nd Marine Aircraft Wing deployed to the Persian Gulf area worked with NAVSPACECOM to become the first U.S. military forces to use a new class of lightweight communications satellites for dedicated operational support.

To provide Navy and Marine Corps forces in the theater with an up-to-date tactical picture of the region's desert topography, beachheads, and force deployments, NAVSPACECOM assisted U. S. Central Command in collecting and distributing critical environmental data from earth-imaging satellites.

Before USS DWIGHT D. EISENHOWER and USS INDEPENDENCE and elements of their Battle Groups arrived in the theater, NAVSPACECOM had ensured that the *high ground* of space was offering a complete spectrum of operational support to deployed tactical commanders.

Established by the Secretary of the Navy in 1983, NAVSPACECOM is today the centerpoint of Navy and Marine Corps operational efforts to provide responsive tactical space systems support to deployed naval forces. The command operates as both the naval component of the United States Space Command and as a second-echelon command reporting to the Chief of Naval Operations and the Commandant of the Marine Corps.

Without a doubt, space is a vital *high ground* to tactical elements of our naval forces. In it, we have deployed satellites that provide crucial intelligence, communications, navigation, and environmental information to the Fleet and Fleet Marine Force to *make every shot count.* NAVSPACECOM is in place to strengthen operational control, provide a central focal point for naval space matters, and more effectively guide our future operational uses of space.

NAVSPACECOM's mission, as the CINCSPACE naval component, is to support day-to-day operations of the Fleet and Fleet Marine Forces worldwide, whether for routine deployments, exercises, or actions in response to a crisis situation. At the center of that support is the headquarter's Naval Space Operations Center. Equipped with state-of-the-art communications and data-gathering equipment, this unique Navy facility is staffed 24 hours a day to enable the command to monitor space activities in support of naval operations around the clock.

NAVSPACECOM occupies a critical role in the Navy's newly promulgated Space and Electronic Warfare (SEW) area. RADM L. E. Allen, Jr., says that *NAVSPACECOM is a key*

link to the Fleet in providing space-related SEW support. We are evolving into a fusion center for all space assets; we are able to offer Fleet and Fleet Marine Force commanders one-stop shopping' for space products critical to the success of their operations.

NAVSPACECOM manages naval use of space-based communications systems. The Fleet Satellite (FLTSAT) Communications System and the Syncom-IV, or LEASAT, system provide worldwide ultra-high-frequency (UHF) communications between naval aircraft, ships, submarines, ground stations, the Strategic Air Command, and national command authorities. As part of this effort, NAVSPACECOM has developed a unique expertise in detecting disturbances and devising corrective measures to keep a maximum number of channels open and functioning.

To further enhance satellite communications capabilities for the future, NAVSPACECOM is managing a joint-service project that has placed extremely-high-frequency (EHF) communications test modules into orbit. Carried into space aboard FLTSAT spacecraft in 1987 and 1989, these experimental FLTSAT EHF Packages (FEPs) are providing our naval forces with limited operational capability at EHF. Furthermore, naval forces are using the FEPs to test new EHF terminals being developed for Milstar, DoD's future military satellite system that is intended to provide a more survivable, jam-resistant communications capability. Additionally, NAVSPACECOM coordinates Navy use of and requirements for the Defense Satellite Communications System (DSCS), which provides worldwide communications at super-high-frequency (SHF) for U.S. and allied forces.

Space-based navigation is another critical area of fleet support. NAVSPACECOM exercises overall operational management for the Navy Navigation Satellite System, also known as TRANSIT. The system was originally conceived in the early 1960s to support the precise navigation requirements of the Navy's fleet ballistic missile submarines. Normally, a minimum of four operational TRANSIT satellites are necessary to provide the required frequency of precise navigation fixes. Day-to-day TRANSIT operations are conducted by the Naval Satellite Operations Center (NAVSOC) headquartered at Point Mugu, California. NAVSOC provides navigation updates and satellite telemetry, tracking, and control to maintain TRANSIT navigation accuracies.

NAVSPACECOM is also working with the joint-service effort to produce a new satellite-based navigation system, the NAVSTAR Global Positioning System (GPS). Scheduled to be fully operational in the late 1990s, it will provide continuous, worldwide, three-dimensional position and velocity information to U.S. and allied land, sea, and air forces. NAVSPACECOM provides naval requirements for GPS use.

A constant and vigilant surveillance of potentially hostile military threats is critical to preserve the operational effectiveness of our armed forces around the world. NAVSPACECOM manages two distinct surveillance efforts in support of fleet and fleet Marine forces: tracking satellites in orbit and monitoring over-the-horizon threats from sea and air forces.

The *space watch* was set in 1961 when the Naval Space Surveillance Center (NAVSPASUR) was created to detect,identify, and track launched space vehicles and satellites. The command operates a surveillance network that can detect objects out to an effective range of 15,000 nautical miles. Data gathered is reported to fleet and fleet Marine forces to alert them when particular satellites of interest are overhead.

The second surveillance effort, which is devoted to over-the-horizon threats, is carried out by the Fleet Surveillance Support Command. Established in 1987, this organization's mission is to operate and maintain the Navy's Relocatable Over-the-Horizon Radar (ROTHR)

systems. ROTHR is a high-frequency, land-based radar that provides wide-area oceanic surface and air surveillance data to support the fleet. ROTHR systems can detect and track ships and aircraft in fixed sectors with ranges in excess of 1000 nautical miles. Detachments of the command directly support the Fleet Commanders-in-Chief who exercise operational control of deployed ROTHR systems.

NAVSPACECOM also helps naval forces exploit the multispectral imagery capabilities of existing Earth resource satellites. A wealth of detailed information on Earth resources is available from space; e.g., shoals and anchorage areas, vegetation, trafficability, and lines of communication are among the Earth's features that can be analyzed and charted using commercial satellites such as LANDSAT. The command works directly with fleet Marine force personnel to enhance their amphibious warfare capabilities using this satellite data.

NAVSPACECOM also expends a great deal of effort devoted to assuring that naval forces are fully aware of the present and future contribution of space systems to naval operations and guaranteeing that the Navy and Marine Corps will have a sufficient number of qualified and trained personnel to fill the ever-expanding space specialty mission areas. NAVSPACECOM responds regularly to fleet requests for predeployment training and other briefings that are tailored to specific deployment scenarios and incorporate tactical space intelligence, along with up-to-the-minute analyses of relevant space systems' capabilities. These training aids are flexible enough in structure and content to be tailored to both fleet and Marine Corps staffs and units.

Apart from operational fleet training and education, NAVSPACECOM also sponsors a space research chair in the Aerospace Engineering Department of the U.S. Naval Academy to develop an early interest in the expanding naval space arena among future officers. Additionally, the command supports the Naval Postgraduate School's space systems engineering and space systems operations courses with advice and consultation about the Navy's current and future technical and educational requirements.

NAVSPACECOM's primary challenge for the coming decade and beyond is to continue to provide effective space support to the naval warfighter. The command's initiatives will include identifying space system requirements, developing operational concepts, and operating space systems in a way that more fully integrates them into weapon systems to make space a more effective tool for the naval warfighter.

Space systems are among those that make up the SEW Commander's arsenal, which is vital to the Fleet's ability to fight and win. The SEW Commander will focus space support into the Fleet in the form of space-based sensors and as a conduit for information. NAVSPACECOM will link the SEW Commanders to focus global space capabilities on each SEW Commander's tactical area of responsibility.

Focusing naval, DoD, and national space assets on each Battle Group's tactical situation will greatly enhance and extend the Fleet's offensive capabilities. NAVSPACECOM has the connectivity and trained staff to provide responsible space support to the SEW commander to put *crosshairs on target* for the Fleet of today and of the future.

RADM HERBERT A. BROWNE, JR.,
USN

COMMANDER
NAVSPACECOM

RADM Herb Browne enlisted in the Navy in 1964 after attending two years of college at Texas A&M University. Following a couple of years as a seaman, he was assigned to the Naval Aviation Training Command for Naval Flight Officer training and was designated and commissioned in March 1966.

After completing A-6 bombardier/navigator training, RADM Browne reported to Attack Squadron VA-65 and deployed to WESTPAC aboard USS KITTY HAWK. In September 1969, he reported to Attack Squadron VA-42, where he served as a flight instructor. In April 1972, he again reported to VA-65 and completed a Mediterranean deployment aboard USS INDEPENDENCE. He then reported to the Armed Forces Staff College and following graduation was assigned to the staff of Commander Medium Attack Wing ONE.

RADM Browne began his third tour with VA-65 as Executive Officer in December 1977. He assumed command in March 1979. During his command tour, the squadron completed a Mediterranean and an Indian Ocean cruise aboard USS DWIGHT D. EISENHOWER. In 1981, he deployed for a second Indian Ocean cruise aboard USS INDEPENDENCE as Air Officer.

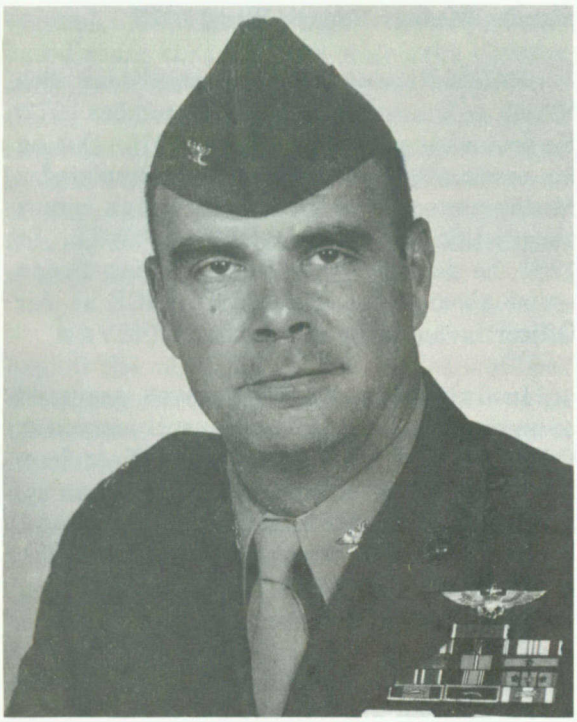
In July 1982, RADM Browne assumed command of VA-42. He subsequently served as COMCARGRU TWO Operations Officer from November 1983 to January 1985. Then he reported to the Office of Naval Operations, Director of Navy Program Planning (OP-08), as special assistant for aviation and RDT&E.

From June 1986 to January 1988, RADM Browne commanded USS NIAGARA FALLS and completed another Indian Ocean deployment. To round out his WESTPAC experience, he was assigned for one year to COMSEVENTHFLT as Operations Officer. In May 1989, he realized an aviator's dream when he was assigned as Commanding Officer, USS JOHN F. KENNEDY. During this tour, JFK deployed to the Red Sea in support of *Operation Dessert Storm*.

Prior to assuming command of NAVSPACECOM on 12 August 1991, RADM Browne was selected for Flag Rank and completed a six-month touch-and-go in Washington, D.C. as director of the Command and Control and Electronic Warfare Systems Division (OP-942).

RADM Browne's awards include the Legion of Merit, Meritorious Service Medal, Air Medal, Navy Commendation Medal, and Navy Achievement Medal.

RADM Browne is married to LCDR Jill Browne, who is his best friend and favorite sailor.



COL CHARLES R. GEIGER, *USMC*

DEPUTY COMMANDER NAVSPACECOM

The son of COL and Mrs. A. B. Geiger, USMC, COL Geiger graduated from Camp Lejeune High School with his wife-to-be, Carole, in June 1960. He attended Georgia Tech for two years before enlisting in the Marine Corps in February 1962.

After Boot Camp at Parris Island, South Carolina and an initial assignment to what was then *A* School at NAS Jacksonville, Florida, he reported to Pensacola, Florida for flight training as a Marine Aviation Cadet (MARCAD). He earned his wings in February 1964, was married, and embarked on a long and continuous career in Fighter Aviation.

Upon completion of his second combat tour, COL Geiger spent two years on exchange duty with the Royal Air Force in Scotland. He returned to the United States to attend Amphibious Warfare School in January 1972 and then returned to college on the Bootstrap Program where he earned a bachelor's degree in aviation management at Auburn University.

COL Geiger returned to WESTPAC a third time as the Maintenance Officer of a Fighter Squadron. He then attended the Air Command and Staff College and, at the same time, completed work on a master's degree in business administration at Auburn University. Subsequently, he resumed flying as the XO, and ultimately the CO, of his own Fighter Squadron. While CO, he completed his fourth tour in WESTPAC.

In the summer of 1980, COL Geiger reported to HQMC to serve as the first head of the Aviation Safety and NATOPS Branch. He went on to attend the Naval War College where he graduated with distinction. Back in Washington, D.C., he served two years with the Office of the Secretary of Defense, working in Tactical Aviation for Program Analysis and Evaluation.

He returned to WESTPAC for a fifth time as the Commanding Officer of a Marine Fighter Group. Following that tour, he served for two years as the Force Marine for the Commander Naval Air Forces, Atlantic Fleet before reporting to Dahlgren as Deputy Commander for Naval Space Command in July 1989.

COL Geiger's decorations include two Legions of Merit, Distinguished Flying Cross, Bronze Star w/combat *V*, Defense Meritorious Serve Medal, Meritorious Service Medal, Air Medal with numeral 22, and the Combat Action Ribbon. He has over 2000 hours in the F-4 Phantom and more than 350 combat missions. His most recent flying is in the F/A-18 Hornet and several types of helicopters.

COL Geiger and his wife, Carole, have two sons: Corey is a graduate electrical engineer and Cameron is a second lieutenant in the Marine Corps.

NAVAL SPACE SURVEILLANCE CENTER (NAVSPASUR)

NAVSPASUR is an Echelon 3 command that serves under the direction of Command, Naval Space Command (COMNAVSPACECOM). NAVSPASUR was established 1 February 1961 as a bistatic space surveillance radar system with transmitters and receivers that span North America. NAVSPASUR also receives information from space-based sensors as well as 26 other U.S. and allied ground-based space surveillance systems. This sensor data from around the world assists NAVSPASUR in maintaining a dynamic catalog of over 7000 earth-orbiting space objects.

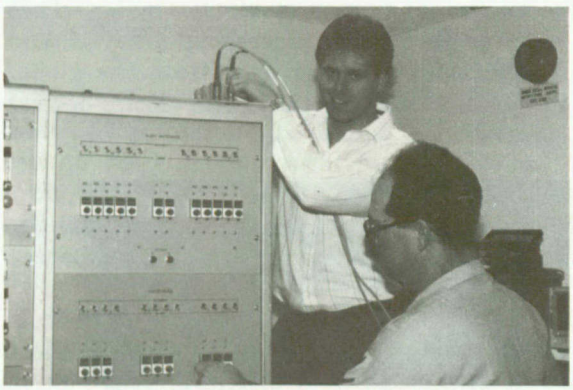
Today, NAVSPASUR has a variety of tactical and strategic mission responsibilities. It provides satellite reconnaissance vulnerability warning to Navy, Marine Corps, and other U.S. and allied forces and agencies worldwide. It provides satellite pointing for numerous customers. NAVSPASUR operates the Tactical Event Reporting System, with detachments in Colorado and Australia as well as a central data dissemination unit in Dahlgren. NAVSPASUR also functions as the Alternate Space Surveillance Center (ASSC) and the Alternate Space Defense Operations Center (ASPADOC) for the Commander-in-Chief, U.S. Space Command.

In its role as a sensor and orbital information processing center for the Space Surveillance Network (SSN), NAVSPASUR provides satellite observations, orbital elements, and look-angles to the U.S. Space Command primary Space Surveillance Center located in Cheyenne Mountain, Colorado Springs, Colorado. Since December 1984, NAVSPASUR has functioned as the alternate, exercising backup command and control of the SSN. This requires the receipt, processing, analysis, and distribution of sensor data from the global network of radar, optical, and electro-optical sensors.

COMNAVSPACECOM delegated operational control of the Tactical Event Reporting System to NAVSPASUR in October 1985. NAVSPASUR quickly established communications and processing capabilities and the system was fully operational in June 1986.

On 21 November 1986, USCINCSPACE designated NAVSPASUR the ASPADOC with the mission to monitor all space events and to inform all U.S. system operators of potential impacts to their satellite systems. This responsibility includes coordination of protection for friendly satellites and battle management and command and control of future antisatellite capabilities.

Today, NAVSPASUR sends most near-real-time support to the Fleet through dedicated links to CINCLANTFLT and CINCPACFLT for immediate satellite broadcast around the world. This has resulted in much faster delivery of information and decreased stress on the Navy's AUTODIN message system.



MANPOWER/BUDGET

NAVSPASUR's personnel and budget have grown with the command's increased responsibilities, but have still been held low with increased mission automation and manpower efficiencies. Present manpower at NAVSPASUR consists of 145 civilians (44 scientists and engineers, 71 technicians, 18 managers/administrators, 5 clerical personnel, and 7 secretaries). There are 29 officers and 77 enlisted military personnel.

NAVSPASUR'S DEPARTMENTS

Analysis and Software *(Department Head: Diane Leite)*—Provides the mathematics, physics, and computer systems support required to determine satellite orbits and to compute the numerous orbital data products required by Naval and other DoD forces. It analyzes sensor systems performance and tactical data processing and develops and maintains software for all operational NAVSPASUR mission systems.

The Systems Division installs and maintains computer operating systems and develops and maintains communications software. The Applications Division develops and maintains the software required to satisfy NAVSPASUR's basic missions (i.e., Space Surveillance, Fleet Support, ASSC, and ASPADOC). The Special Projects Division provides mathematical modeling of satellite-related applications and supports the other divisions in projects that require extensive developmental efforts.

Automatic Data Processing *(Department Head: CDR Franz H. Porter)*—Operates and is responsible for error detection on the CDC CYBER computer systems, two Automatic Digital Data Assembly Systems (ADDASs), and the Space Information Management System (SIMS). It controls and maintains the data flow lines to and from the field stations, establishes operator procedures, and ensures the training of operators. The computer system is operated continuously in support of multiple operational requirements. Manages and supervises the command information security program.

Manages Facilities Division including MILCON-P249 and Fleet Introduction Team for the new facility, hardware and software, and personnel transition and training.

Engineering *(Department Head: Carroll C. Hayden)*—Responsible for the operational readiness, maintenance, and functioning of the equipment assigned to the field stations and sensor system. It supervises the sensor field stations and is responsible for their technical effectiveness, conducts tests on new or prototype systems, provides technical assistance in analysis studies, and directs the contractor that operates the nine field stations. The department also performs all necessary engineering for the development and integration of new equipment into the field and fulfills depot maintenance and material/logistics support functions for the radar interferometric transmitters, receiver, and support systems. Engineering is also responsible for the Command property accounting function and Field Station Facilities Management.

Operations *(Department Head: CDR Pierre N. Charbonnet)*—Manned 24 hours, 7 days a week by a qualified Space Surveillance Watch Officer, a Command Duty Officer, and a watch team. Operations Center personnel continually monitor a catalog of 7000 space objects and process all launches, maneuvers, breakups, and deorbits of foreign and domestic satellites. It is responsible for training personnel to ensure sufficient manpower to assume the USCINCSPACE ASSC and the ASPADOC functions normally conducted by the Cheyenne Mountain Complex, Colorado Springs.

During weekly proficiency activations, NAVSPASUR assumes full command and control of the multinational space surveillance network and space defense missions. NAVSPASUR watch crews are responsible for processing all space events and keeping CINCSPACE informed. Twice a year (spring and fall), NAVSPASUR activates for a period of one week fulfilling the role of the ASSC and ASPADOC.

Analysts in the department maintain an up-to-date catalog of all space objects. They keep an accurate database on all foreign launches, which enables them to predict future satellite positions and impact points for decaying satellites.

The Intelligence Division maintains all incoming intelligence data, briefs personnel on a need-to-know basis, and establishes liaisons with other intelligence agencies.

Resources and Administration Services *(Department Head: David A. Lepard)*—Responsible for the administrative and financial support of NAVSPASUR and its remote detachments. The Administration Services Division assures compliance with command security programs, provides management analysis services, and directs all phases of civilian and military personnel management programs and the Manpower Management Program.

The Fiscal Management Division develops accounting and budgeting operating procedures for the command, advises managers on fiscal policy and procedures, and is responsible for the Command Expense Operating Budget.

Systems, Plans, and Projects *(Department Head: W. Leroy Shelton)*—Working to keep NAVSPASUR moving forward; they look to the future—develop new systems to allow the Center to progress with the needs of the increasing missions and responsibilities of NAVSPASUR. Researching cost, site locations, necessary manpower and equipment, support from other commands and agencies, and future needs are only a few of the many facets of this department. It is currently working on preparing the Center to move to their new building (along with the Fleet Introduction Team), upgrading to a new computer system, installing sensor upgrades, and improving connectivity with the SSN.

NAVSPASUR'S FIELD STATIONS

The six receiver stations and three transmitter stations located across the U.S. makeup the NAVSPASUR radar interferometry space surveillance *fence*. The transmitter stations emit electromagnetic energy in a fan-shaped pattern that spans the continent and extends far into space. As an earth-orbiting object passes through this energy field, the radar signal is reflected back to the receiver station antennas. This energy is transformed into digital angles and time-of-arrival data and is transmitted to NAVSPASUR's processing center in Dahlgren. Currently, the day-to-day operation, maintenance, and staffing of the field stations are under contract to FKW, Inc., Oklahoma City, Oklahoma.

NAVSPASUR'S DETACHMENTS

NAVSPASUR's two detachments provide Tactical Event Reporting System (TERS) information to the TERS Division: Detachment Buckley, Peterson AFB, Colorado Springs, Colorado (LT Maude Young, Officer-in-Charge); Detachment Echo, Woomera, Australia (LT Gina Hawkins, Officer-in-Charge).

NAVAL RESERVE (NR) NAVSPASUR (NR0266)

NR NAVSPASUR is a highly complementary reserve command that drills routinely by activating for training as the CINC's operational command center for SSN. The Commanding Officer is CDR Steve O'Brien, USNR. There are 54 reserve personnel assigned to this unit.

CAPT HORATIO W. TURNER IV
USN
COMMANDING OFFICER
NAVSPASUR

CAPT Turner entered the Navy through the NROTC program at Princeton University. He was commissioned upon graduation in June 1967. He completed flight training and was designated a Naval Aviator in August 1968.

CAPT Turner began his aviation career flying the SH-3 Sea King helicopter in HS-4 and HS-8, with two WESTPAC deployments. Next came shore duty in HS-10, with temporary assignment to HS-8 for a 1972 WESTPAC deployment, followed by assignment to COMFAIRWESTPAC for 10 months to establish a Naval Air Facility at Misawa, Japan.

In 1974, CAPT Turner transitioned to the SH-2 *Sea Sprite* helicopter. He assisted in the establishment of HSL-37 at Barbers Point, Hawaii, first as squadron Operations Officer and then as Officer-in-Charge, HSL-37 Detachment ONE, deploying to WESTPAC and the Indian Ocean in 1976. He then served Commander, Naval Surface Group Mid-Pacific as Air and ASW Officer.

In 1977, CAPT Turner attended the Naval War College Command and General Staff course; he graduated with highest distinction. He was next assigned to HSL-34, NAS Norfolk, Virginia.

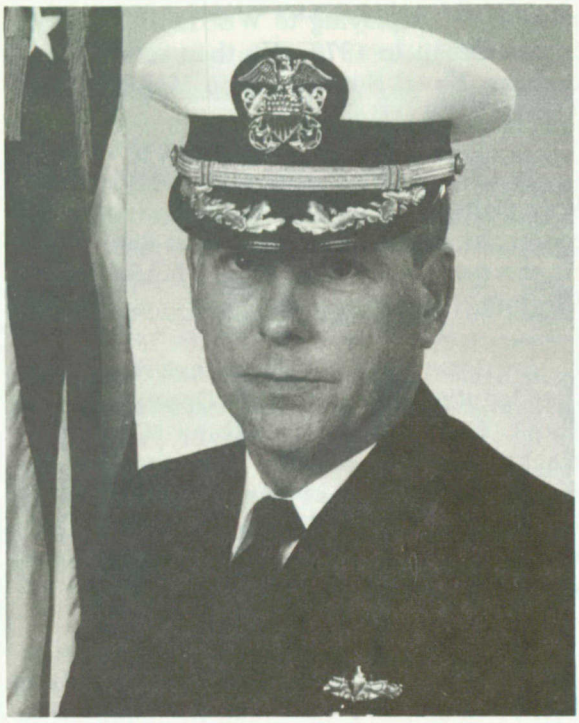
In August 1981, CAPT Turner reported to the Deputy Chief of Naval Operations for Plans, Policy, and Operations (OP-06) in Washington, D.C., where he served as Air Warfare Officer and as primary action officer for Communications, Electronic Warfare, Outer Space, Arctic Warfare, and JCS and Navy wargaming.

CAPT Turner reported for duty as Executive Officer, helicopter Training Squadron EIGHT in January 1984 and, in March 1985, assumed the duties of squadron Commanding Officer.

CAPT Turner was next assigned as Executive Assistant to the Director of Operations, U.S. Space Command, in July 1986. In March 1988, he was assigned as Deputy Director of Plans for Space Systems, where he directed USSPACECOM planning for new system requirements and current system upgrades. CAPT Turner assumed command NAVSPASUR in June 1989.

During his aviation career, CAPT Turner has accumulated more than 3500 flight hours. His awards include the Defense Superior Service Medal, the Meritorious Service Medal, and the Navy Commendation Medal (two awards). He holds subspecialties in Space Operations, Political Military Affairs, and Antisubmarine Warfare and joint operations.

CAPT Turner is married to the former Penelope McCord Watson of San Antonio, Texas. The Turners and their children, Alexandra and Ridge, reside in Dahlgren, Virginia.



CDR ALLAN R. JONES, *USN*

EXECUTIVE OFFICER
NAVSPASUR

CDR Allan R. Jones was commissioned June 1974 upon graduation from the U.S. Naval Academy. He entered the surface fleet.

CDR Jones began his career as a Communications Officer and, later, Combat Information Center Officer onboard USS HAROLD J. ELLISON (DD 864). He made operational deployments to the Mediterranean and the Caribbean.

In October 1977, he was assigned to the Surface Warfare Officer School Command, Newport, Rhode Island. He instructed newly commissioned ensigns in combat systems and, later, was head of the student testing and evaluation program. In June 1980, CDR Jones entered the department head curriculum and, upon completion, was assigned as the Engineering Officer, USS JACK WILLIAMS (FFG 24) homeported in Mayport, Florida with operational deployments to the Mediterranean, Persian Gulf, Northern Europe, Arctic Circle, and Caribbean.

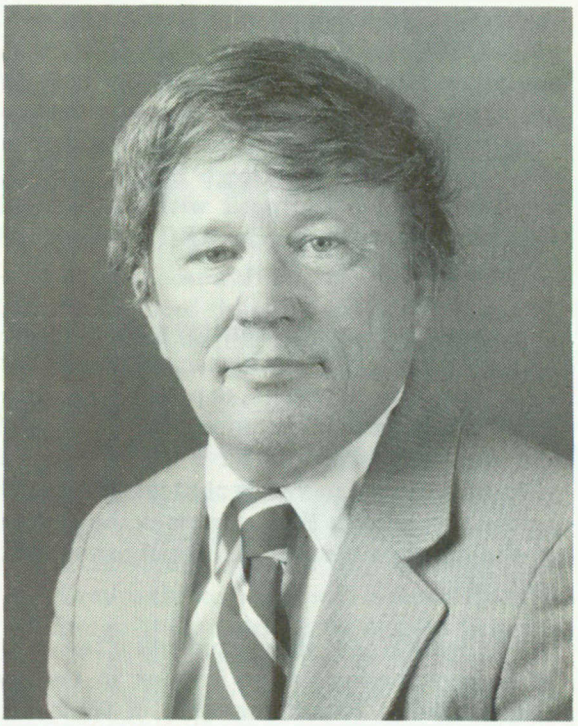
In June 1984, CDR Jones reported to the Naval Post Graduate School in Monterey, California, where he obtained a masters degree in computer science. Upon graduation, he attended the Prospective Executive Officers course at Newport, Rhode Island.

In August 1986, CDR Jones reported as Executive Officer to USS TALBOT (FFG 4) homeported in Mayport, Florida. He made operational deployments to the Mediterranean, Persian Gulf, Central America, South America, and Caribbean.

In May 1988, CDR Jones reported to NAVSPACECOM as Head of the Systems Integration Branch.

CDR Jones holds a BS in Operations Research from the U.S. Naval Academy and an MS in Computer Science from the Naval Post Graduate School. His awards include the Navy Commendation Medal (three awards), Navy Achievement Medal, National Defense Service Medal with Bronze Star, Navy Expeditionary Medal, and Sea Service Deployment Ribbon. CDR Jones holds subspecialties in Space Operations and Weapon Systems Technology and is Surface Command qualified.

CDR Jones is married to the former Kathleen Elizabeth Huebschman of Baltimore, Maryland. The Jones and their children Kathleen, Kirstan, Kimberly, and Tyler reside in Dahlgren, Virginia.



DR. STEPHEN H. KNOWLES

TECHNICAL DIRECTOR
NAVSPASUR

Dr. Stephen H. Knowles, a native of New York City, graduated from Amherst College cum laude in 1961. After graduation, he began his government career at the Naval Research Laboratory (NRL). Dr. Knowles studied for his doctorate while employed at NRL and received his Ph.D. in astronomy from Yale University in 1968 with a specialization in celestial mechanics.

His career includes 25 years spent at NRL in the Space Science Division, where his research included investigations in the fields of radar astronomy, radio astronomy, and signal processing. He devoted two years (1974 to 1976) to related research in Sydney, Australia.

Dr. Knowles reported to NAVSPASUR in September 1986. He resides in Woodbridge, Virginia.

AEGIS TRAINING CENTER (ATC)

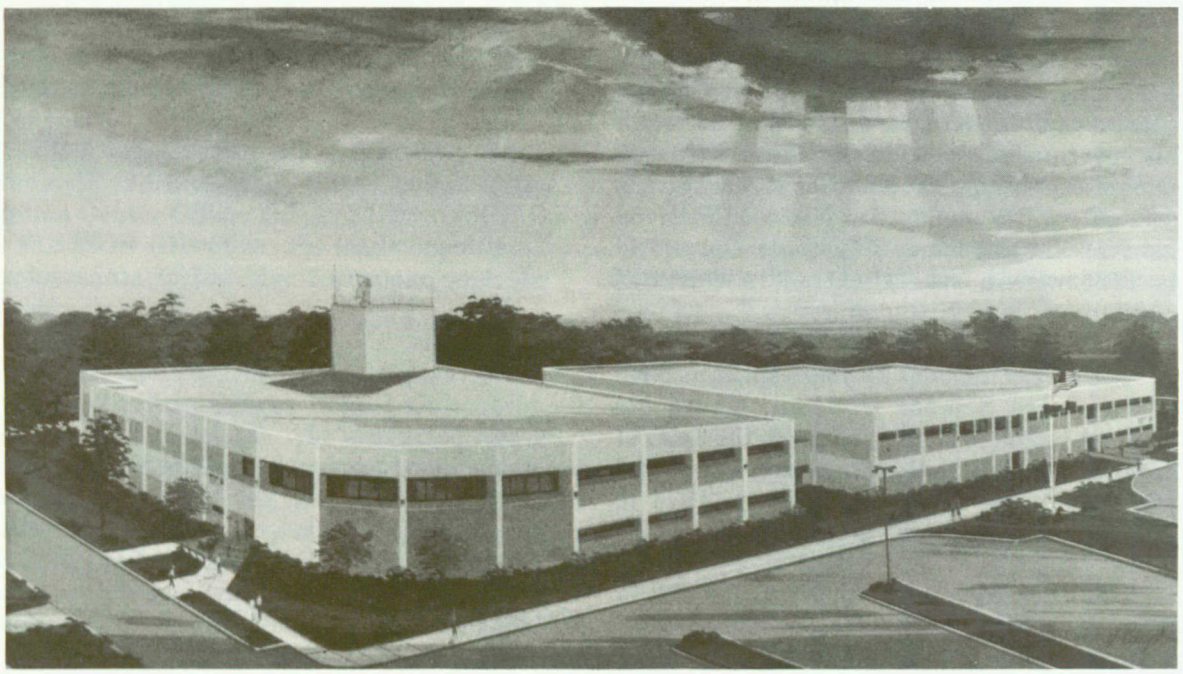
The RADM Wayne E. Meyer AEGIS Education Center, headquarters for the ATC, is located at NSWCDD. It houses numerous classrooms, equipment rooms, and laboratories that simulate an AEGIS ship's Combat Systems suite and other shipboard radars and weapons systems found on AEGIS cruisers and destroyers.

The school is staffed and maintained by a team of 290 professional military and civilian instructors, technicians, and support personnel. This team is dedicated to training and equipping virtually every *AEGIS* sailor with the skills they will need to man the Navy's most sophisticated warships: the Ticonderoga class cruiser and the Arleigh Burke class destroyer; both are equipped with the AEGIS Combat System and the AEGIS Weapons System.

During 1991, more than 639 students passed through the ATC, Dahlgren. Students are here from 4 to 27 weeks, depending on their specific instructional requirements. Most of the long-term students have already had a year of intense naval technical schooling before they arrive; they represent the cream-of-the-crop in terms of intelligence and motivation.

At week's end, these students often seek off-base recreation in the area or in nearby communities. About one-third of them are married and bring their families with them; therefore, there is a constant need for short-term rental housing.

RADM Wayne E. Meyer AEGIS Education Center



Staff members at the ATC are typically senior enlisted personnel or junior officers who serve a three-year tour-of-duty at the command. They generally become more involved in the activities of the community (e.g., athletic coaches, volunteer firemen, etc.).

AEGIS brings a revolutionary, multimission combat capability to the U.S. Navy. AEGIS-equipped ships are capable of engaging and defeating enemy aircraft, missiles, submarines, and surface ships and of performing strike warfare missions with the TOMAHAWK Cruise Missile.

In addition to the education and training provided in Dahlgren, the command also has 12 AEGIS Training Units and Training Support Groups throughout the U.S. and Japan. It is through these *satellite* commands that the AEGIS training system comes full circle. By staffing facilities at shipbuilding yards and large naval ports, instructors can provide direct support to ships' crews in need of refresher training or can act as liaison with shipyard workers, engineers, and system designers as well as with the AEGIS manufacturers in Moorestown, New Jersey. In addition to providing support, they open two-way communication and provide feedback to the school to keep training courses up-to-date and fine-tuned.

Each year, the ATC and its *satellite* units prepare more than 700 officers for duty as Commanding Officers, Executive Officers, Combat System Officers, and AEGIS Console Operators. More than 500 enlisted personnel receive training in skills that range from AEGIS communications to operating and maintaining the various AEGIS Weapons and Combat systems.

The school and its personnel maintain a high profile within the Dahlgren and surrounding communities. Through the volunteer efforts of the staff and students, many off-duty hours are spent with civic projects; e.g., the Dahlgren Emergency Rescue Squad, the Dahlgren School Board, the Big Brother/Big Sister Organization, and various church and social activities. As a Navy school and as an organization within the Dahlgren community, the RADM Wayne E. Meyer AEGIS Education Center is committed to reaching its military goals as well as maintaining a positive identity within the public eye.

COMMAND STRUCTURE

The ATC command has 10 subordinate AEGIS Training Units and Training Support Groups throughout the continental U.S. with additional groups in Pearl Harbor, Hawaii and Yokosuka, Japan. AEGIS Training Units are located at the Combat Systems Engineering Development Site (CSEDS), Moorestown, New Jersey and at the AEGIS Combat System Center (ACSC), Wallops Island, Virginia. Principal AEGIS Training Support Groups provide AEGIS expertise in San Diego and Norfolk to support Type Commander training and readiness needs in addition to specific shipboard training.

The AEGIS training concept is unique and innovative. Training for new AEGIS equipment is conducted at the AEGIS Training Unit, CSEDS in consonance with engineering development. As the engineering development is completed, the equipment is installed at the RADM Wayne E. Mayer AEGIS Education Center, Dahlgren, Virginia and/or at the ACSC. This combined engineering and training concept continues to be applied to AEGIS system upgrades as they occur.

ARLEIGH BURKE CLASS

Guided Missile Destroyers

DDG 51	*U.S.S. ARLEIGH BURKE*
DDG 52	*U.S.S. BARRY*
DDG 53	*U.S.S. JOHN PAUL JONES*
DDG 54	*U.S.S. CURTIS WILBUR*
DDG 55	*U.S.S. STOUT*
DDG 56	*U.S.S. JOHN S. MCCAIN*
DDG 57	*U.S.S. MITSCHER*
DDG 58	*U.S.S. LABOON*
DDG 59	*U.S.S. RUSSELL*
DDG 60	*U.S.S. PAUL HAMILTON*

TICONDEROGA CLASS

Cruisers

CG 47	*U.S.S. TICONDEROGA*
CG 48	*U.S.S. YORKTOWN*
CG 49	*U.S.S. VINCENNES*
CG 50	*U.S.S. VALLEY FORGE*
CG 51	*U.S.S. THOMAS S. GATES*
CG 52	*U.S.S. BUNKER HILL*
CG 53	*U.S.S. MOBILE BAY*
CG 54	*U.S.S. ANTIETAM*
CG 55	*U.S.S. LEYTE GULF*
CG 56	*U.S.S. SAN JACINTO*
CG 57	*U.S.S. LAKE CHAMPLAIN*
CG 58	*U.S.S. PHILLIPINE SEA*
CG 59	*U.S.S. PRINCETON*
CG 60	*U.S.S. NORMANDY*
CG 61	*U.S.S. MONTEREY*
CG 62	*U.S.S. CHANCELLORVILLE*
CG 63	*U.S.S. COWPENS*
CG 64	*U.S.S. GETTYSBURG*
CG 65	*U.S.S. CHOSIN*
CG 66	*U.S.S. HUE CITY*
CG 67	*U.S.S. SHILOH*
CG 68	*U.S.S. ANZIO*
CG 69	*U.S.S. VICKSBURG*
CG 70	*U.S.S. LAKE ERIE*
CG 71	*U.S.S. CAPE ST. GEORGE*
CG 72	*U.S.S. VELLA GULF*
CG 73	*U.S.S. PORT ROYAL*

FINANCIAL IMPACT ($M)

	FY92	FY93	FY94
Staff	2.8	2.9	3.0
Civil Service	1.9	2.3	2.7
Students	3.7	3.8	3.9
Contracts	5.0	8.8	9.0
Activation	5.0	1.5	2.0
Total	**21.2**	**19.3**	**20.6**

WHERE WE LIVE

	Personnel	Dependents
Dahlgren/ King George	267	455
On Base	155	240
Off Base	112	215
Fredericksburg/ Spotsylvania/ Stafford	31	27
Colonial Beach/ Westmoreland	52	87
Southern Maryland	16	29
Other	15	40
Total	**381**	**638**

CAPT EDWARD B. HONTZ, *USN*

COMMANDING OFFICER
ATC

CAPT Hontz is a native of Watsontown, Pennsylvania and graduated from the U.S. Naval Academy at Annapolis, where he received his commission in 1967. In 1978, CAPT Hontz was awarded a Masters of Science Degree in Systems Acquisition Management from the Naval Postgraduate School in Monterey, California. He earned a Masters Degree from the Naval War College in Newport, Rhode Island, graduating with High Distinction in 1985.

CAPT Hontz's initial assignment was First Lieutenant aboard USS BIGELOW (DD 942) from 1967 to 1969. He then reported to the Naval Support Activity in Danang, Republic of Vietnam, where he served as a Boat Group Commander and Asst. Lighterage Officer, responsible for river and coastal transshipment of logistic material within the I Corps Military Region.

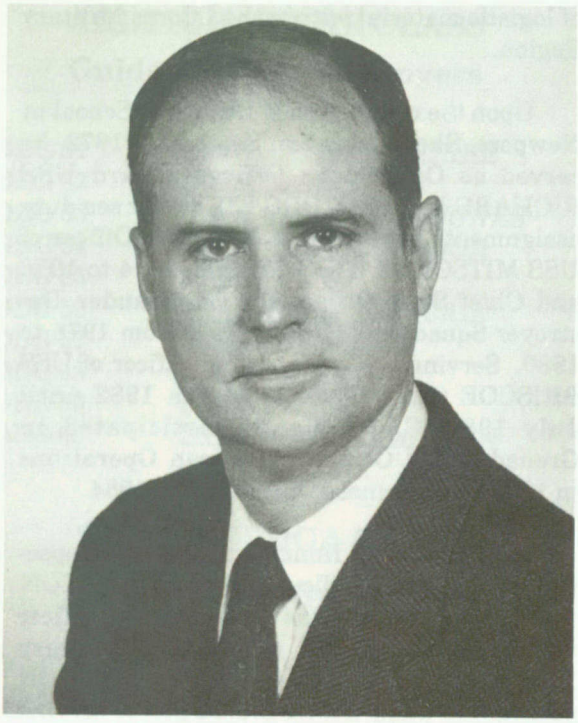
Upon the completion of Destroyer School in Newport, Rhode Island in September 1972, he served as Operations Officer aboard USS RICHARD E. BYRD (DDG 23). Other sea duty assignments have been as Executive Officer of USS MITSCHER (DDG 57) from 1974 to 1976 and Chief Staff Officer for Commander Destroyer Squadron THIRTY-TWO from 1978 to 1980. Serving as Commanding Officer of USS BRISCOE (DD 977) from March 1982 until July 1984, CAPT Hontz participated in Grenadan and Central American Operations in 1983 and Lebanese Operations in 1984.

In 1988, CAPT Hontz reported as Prospective Commanding Officer of USS PRINCETON (CG 59) and became the Commanding Officer upon commissioning of the ship in February 1989. CAPT Hontz commanded PRINCETON during *Operation Desert Shield/Storm* serving as Local Antiair Warfare Coordinator for Battle Force Zulu in the Northern Arabian Gulf.

Assigned to shore duty after his Vietnam assignment, CAPT Hontz served as the Postgraduate School Placement Officer in the Bureau of Naval Personnel from 1970 to 1972. He also served ashore as an instructor at Tactical Training Group Atlantic, as the Cruise Missile Readiness Officer on the staff of the Commander-in-Chief Atlantic (CINCLANT), and from 1985 to 1987 as the Head of the AEGIS Cruiser/Destroyer Branch on the staff of the Deputy Chief of Naval Operations for Surface Warfare.

In 1991, CAPT Hontz reported as Commanding Officer, AEGIS Training Center, Dahlgren, Virginia.

CAPT Hontz is married to the former Jacquelyn G. Domich of Hyattsville, Maryland. They have two daughters: Jennifer, a student at Northwestern University, and Gretchen, an eighth grade student at Dahlgren School.



MR. LUKE H. MILLER

TECHNICAL DIRECTOR
ATC

Mr. Miller was born in San Angelo, Texas. He graduated from The University of Texas at Austin, earning a B.S. degree and a commission in the U.S. Navy. He later received an M.S. degree in Computer Science from the Naval Postgraduate School.

He served in a variety of afloat billets during his naval career and was designated a Proven Subspecialist in Command, Control, and Communications. Mr. Miller was the U.S. representative to NATO for Navy Tactical Data System (NTDS) data extraction/data reduction and Program Manager for the NTDS Model 4 system development effort. Later, he became Project Officer for Restructured NTDS. He then directed operation of the nation's largest space surveillance radar system and was awarded the Navy Meritorious Service Medal.

After completing his naval career, Mr. Miller joined private industry. He authored a document for CNO (OP-943) that identified near-term and out-year requirements for space surveillance system capability. He was a Project Engineer in the Ocean Surveillance Information System Baseline Upgrade (OBU) program and later became the OBU support services Project Manager to the Naval Space and Warfare Systems Command. Mr. Miller furnished engineering services to NAVSWC and the AEGIS Training Center, supporting the planning and engineering of the Combat Systems Laboratory, AEGIS Combat Systems Center, and AEGIS Education Center.

Mr. Miller was selected as Technical Director, ATC, in 1987. He and his wife, Cindy, make their home in King George.